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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,360	04/01/2004	Shoulian Zhu	G0723.10U	8262
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EXAMINER				
JOHNSON, VICKY A				
ART UNIT		PAPER NUMBER		
3682				
MAIL DATE		DELIVERY MODE		
07/23/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/815,360

Applicant(s)

ZHU, SHOULIAN

Examiner

Vicky A. Johnson

Art Unit

3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SG/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 11-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parrish et al (US 5,718,151) in view of Kraft (US 1,804,993) and Broughton (US 6,257,088).

Parrish et al disclose a steering wheel mounting assembly comprising: a shaft (12) a coupling member (26) positioned on said shaft (see Fig 1); a steering wheel comprising a rim (17), a hub (14) and at least one spoke (16) connecting said rim to said hub, said hub having an open rear end, external threading (22), a bore (20) and a closed face (see Fig 1), and a tightening nut (30) disposed about said shaft and abutting said coupling member (9), said tightening nut joined to said hub (14) of a steering wheel (see Fig 1).

Parrish et al disclose the mounting assembly as described above, but does not disclose hub anti-rotation means, and shaft anti-rotation means.

Kraft teaches the use of a hub anti-rotation means (18, 10, 15, 16) for precluding relative independent rotational movement between a hub (3, 4) and a coupling member (11).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the assembly of Parrish et al to include anti-rotation means as taught by Kraft in order to increase the driving connection between the steering wheel and the shaft.

Parrish et al disclose an assembly as described above, but does not disclose the shaft having a threaded end, and a shaft nut positioned on the threaded end of the shaft.

Broughton teaches the use of a shaft (12) having a threaded end (28) and a shaft nut (96) positioned on the threaded end of the shaft (see Fig 2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the assembly of Parrish et al to include a shaft as taught by Broughton in order to provide a fine adjustment between the steering wheel and the shaft.

Re claim 12, Parrish et al show, said hub (14) further comprises threading (22) adjacent said open rear end (see Fig 1), and wherein said tightening nut (30) comprises a substantially closed rear end, an annular wall having threading (see Fig 1), an open front end and a coaxial opening (see Fig 1).

Re claim 13, Parrish et al show, said coaxial opening is larger than said shaft (12) and smaller than said coupling member (9, see Fig 1).

Re claim 14, Parrish et al show, said threading (22) on said hub is external and said threading (unnumbered) on said tightening nut is internal (see Fig 1).

Re claim 15, Kraft shows said hub anti-rotation means comprises at least one key and at least one slot corresponding to said key (see Fig 6).

Re claim 16, Kraft shows said shaft anti-rotation means comprises at least one key and at least one slot corresponding to said key (see Fig 7).

Re claim 23, Kraft shows said bore (11) of said hub is tapered (see Fig 7), and further wherein said coupling member comprises a tapered main body, a large diameter rear end (see Fig 7), a small diameter forward end (see Fig 7), and a tapered bore (see Fig 7).

Response to Arguments

Some further comments regarding the applicant's remarks are deemed appropriate.

The applicant argues that the combination of the above recited references fail to meet the limitation of the claims because the Kraft and Broughton references are open face steering wheels. Neither the Kraft reference nor the Broughton reference is used to teach the recited limitation of a closed face. The Parrish et al reference discloses the closed face. The Kraft reference teaches the anti rotations elements and the Broughton reference teaches the threaded shaft end and the nut.

It is also argued that the process of assembling the device and the process of manufacturing the device have advantages. It is agreed, but determination of patentability is based on the product itself.

The applicant's remarks have been accorded due consideration, however, they are not deemed fully persuasive.

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vicky A. Johnson whose telephone number is (571) 272-7106. The examiner can normally be reached on Monday-Friday (7:00a-3:30p).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Vicky A. Johnson/
Primary Examiner, Art Unit 3682